



INSTRUCTION MANUAL

BODY FAT ANALYZER

Model HBF-306



Thank you for purchasing the OMRON Body Fat Analyzer.

Before using this unit for the first time, please be sure to read this instruction manual carefully and use the unit properly.

Please keep this instruction manual on hand for future reference.

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Notes on Safety Please read this section carefully before using the unit.

- The warning signs and the sample icons shown here are listed in order for you to use this product safely and correctly as well as to prevent risk and injury to you and others.
- The icons and meanings are as follows:

⚠ Danger	Indicates matters in which an imminent risk of death or serious injury may arise as a result of incorrect handling.
⚠ Warning	Indicates matters in which the possibility of death or serious injury may arise as a result of incorrect handling.
⚠ Caution	Indicates matters in which bodily harm or material damage may arise as a result of incorrect handling.*

^{*}Material damage refers to a wide range of damage involving your house, household goods, domestic animals, and pets.

Examples of signs



The \bigcirc icon indicates prohibitions (what you should not do). Matters involving actual prohibitions are indicated by text or pictures in or near \bigcirc .

The icon to the left refers to "prohibition to disassemble".



The lacktriangle icon indicates something that must be followed. Matters involving actual compulsory actions are indicated by text or pictures in or near lacktriangle.

The icon to the left refers to "general notice".

_MDanger

Never use this unit in combination with the following medical electronic devices.

- (1) Medical electronic implants such as pacemakers.
- (2) Electronic life support systems such as an artificial heart/lung.
- (3) Portable electronic medical devices such as an electrocardiograph.
- This unit may cause the above mentioned medical electronic devices to malfunction.

Marning

Never start weight reduction or exercise therapy without the instructions of a physician or a specialist.

- Self-diagnosis may damage your health condition.
- Consult with your physcian before using when pregnant.



∕↑Caution

Do not disassemble this unit. You may be injured or damage the unit.



General Advice

Do not use this unit when your body and/or fingers are wet, such as after taking a bath.

Do not place this unit in a highly humid environment, where water may splash, in direct sunshine, in a place where the air from air conditioning hits directly, or near fire.

Do not wash this unit with water.

As this unit is a precision instrument, do not drop, vibrate, or apply strong shock.

Do not use batteries not specified for this unit. Do not insert the batteries with the polarities in the wrong direction.

Features of the Product

Easy-to-Understand Display

The unit displays the measured value of body fat percentage by the BI method and indicates the body mass in four ranges of LOW, NORMAL, HIGH, and VERY HIGH according to the BMI value.

BI method: Bioelectrical Impedance method (see page 5)

BMI: Body Mass Index = (weight (lbs) x703) / height (in) / height (in) BMI: Body Mass Index in metric = weight (kg) / height (m) / height (m)

NORMAL or ATHLETE mode can be selected for a more accurate measurement.

Measurement is fast and simple.

After inputting the data, a measurement can be started by simply holding the grip electrodes and pressing the Start button. The measured results are displayed approximately 7 seconds after the START symbol is displayed.

The measured results are shown in an easy-to-see display.

Body fat percentage and body mass index are shown simultaneously in an easy-to-see large digital display and a bar display that can be read at a glance.

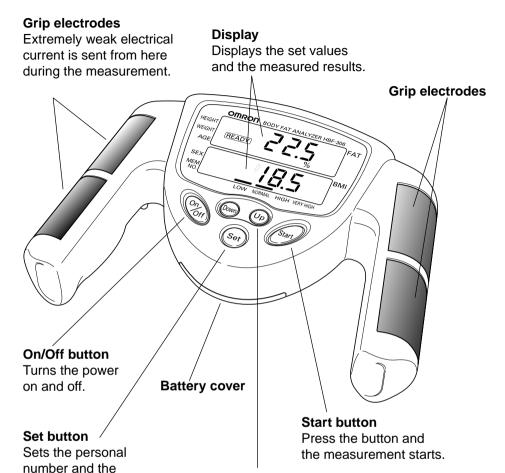
The memory function stores up to 9 personal profiles

The memory function can store up to 9 people's information (height, weight, age, and gender).

Names and Functions of the Parts

Main unit

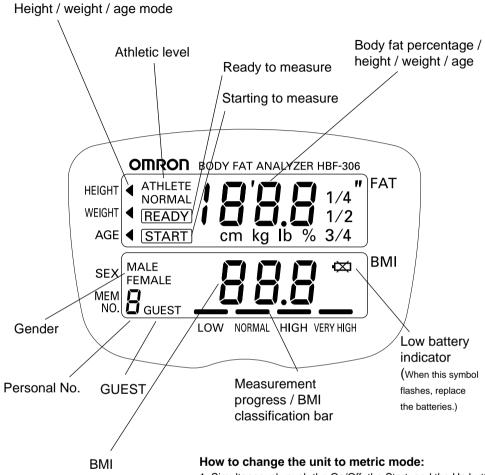
personal data.



Up / Down button

Sets the numerical values for personal information including height, weight, age and gender. This button is also used to set the personal numbers from 1 to 9.

Display



- Simultaneously push the On/Off, the Start, and the Up buttons.
 The power turns on and the bottom LCD should read USA.
 (If the LCD says "guest", turn the unit off and try again.)
- 2. Push the Set button and the LCD changes.
- Push and hold the Set button again for 3-4 seconds until the upper LCD changes to "CAI". At this time, all personal data are deleted.
- 4. Push the On/Off button to turn off the power.
 - In this mode, the power does not turn off automatically. Be sure to turn off the power.
- Push the On/Off button to turn on the power.The display unit changes to the metric system.
 - To return to US display, repeat the same procedure.

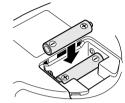
How to Insert and Replace the Batteries

How to Insert the Batteries

1. While pressing the mark on the battery cover on the back of the unit with your finger, slide off the cover in the direction of the arrow.



2. Insert two AAA batteries with the polarities in correct alignment.



3. Slide and securely close the battery cover.



Battery life and replacement



When the battery replacement symbol flashes, replace both batteries with new ones.

- Replace the batteries after turning off the power.
- Dispose of the used batteries according to the disposal method in the municipality where you live.

Battery life

- Two AAA batteries will last approximately 1 year (when measurements are made twice a day).
- Because the supplied batteries are for monitor use only, they may have a shorter life.

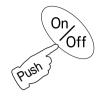
As the batteries may leak and damage the main unit, please note the following points:

- Remove the batteries from this unit when you are not going to use it for a long period of time (approximately three months or more).
- Replace the worn batteries with new ones immediately.
- Do not use manganese and alkaline batteries together.
- Do not use new and worn batteries together.

1. Turn on the power.

Push the On/Off button.

All displays turn on.





2. Set the personal data.

If you don't want to set personal data for each measurement:

Select the quest.

- The display GUEST flashes.
 Push the Set button.
 The display GUEST changes
 to NORMAL / ATHLETE selection mode.
- Set the personal data (Refer to "Setting of personal data").

NO. GUEST

MFM

When you want to set the personal number and store the personal data:

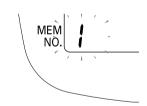
Select the personal number.

- 1) When Guest is flasing, push the Up / Down button and select a personal number from 1 to 9.
- Push the Set button.
 The personal No. turns on and changes to NORMAL / ATHLETE selection mode.
- Set the personal data (Refer to "Setting of personal data").

When you have already set your personal No. and stored your personal data:

Select your personal number

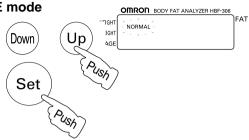
- Push the Up / Down button to select your personal number
- Push the Set button.
 The personal No. turns on and the personal data is displayed.
- 3) Start the measurement (Refer to "Start the measurement").



Setting of personal data

How to select NORMAL / ATHLETE mode

- 1) Each time you push the Up / Down button, the display of NORMAL / ATHLETE flashes.
- 2) Push the Set button to select NORMAL or ATHLETE.



Should I use Normal or Athlete mode?

NORMAL / ATHLETE selection

Calculate your FIT index by using the formula below. Use Athletic mode if your FIT index is over 60 or more otherwise select Normal mode.

FIT Index = Frequency \times Intensity \times Time

FIT Index ≥ 60 — Athlete FIT Index < 60 — Normal

Number	Frequency of Exercise
5	Daily or almost daily
4	3 to 4 times per week
3	1 to 2 times per week
2	A few times per month
1	Less than once per month

Intensity	Conditioning Exercise	Sports
	Cycling - > 12 mph pace	Basketball - competitive
	Weightlifting - vigorous, powerlifting or bodybuilding	Boxing Football - competitive
	Rowing - moderate to vigorous	Handball, racquetball, or squash
	Stationary cycling - moderate to vigorous effort	Ice hockey
5	Rowing machines - moderate to vigorous effort	Karate or kickboxing Rockclimbing
	Aerobic dancing - high impact	Rugby
	Step aerobics	Soccer - competitive
	Running -> 5.0 mph	Tennis
	Rope jumping	Swimming - competitive or lap
	Rollerblading (roller skating)	Speed skating - competitive
	Ski machine	Skiing - cross-country
	Stairstepping	Skiing - downhill racing

Continued on the next page

Intensity	Conditioning Exercise	Sports & Recreational Activities
	Cycling - < 12 mph pace	Archery
	Weightlifting - moderate effort	Basketball - shooting baskets
	Stationary cycling - light effort	Bowling
	Rowing - light effort	Fencing
	Calisthenics	Golf
4	Stretching / Yoga	Gymnastics
7	Rowing machines - light effort	Horseback riding
	Water aerobics or water exercise	Baseball
	Aerobic dancing - low impact	Softball
	Jogging - < 5.0 mph	Tai Chi
	Walking - > 2.5 mph	Volleyball - competitive
	Swimming - leisurely	Wrestling - competitive
	Rollerblading - leisurely	Ice Skating - < 9 mph

Time	Duration
4	45 minutes or more
3	30 to 44 minutes
2	15 - 29 minutes
1	less than 15 minutes

Example: You run 5 times a week for 30 minutes

FIT Index = Frequency X Intensity x Time

 $75 = 5 \times 5 \times 3$

FIT Index ≥ 60, Athlete mode

Setting of height (Setting range: 3' 4" to 6' 6")

- Confirm the height setting screen. The height value 5' 7" flashes. The height ◀ is indicated.
- 2) Push the Up / Down button to set the height value. The height value increases increments by 1/4". By pushing the button for more than 1 second, the height values change at high speed.
- 3) Push the Set button to set the height value.

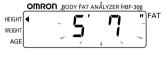
 The display changes to the weight setting screen.

Setting of weight (Setting range: 23 lb. to 440 1/2 lb.)

- Confirm the weight setting screen. The weight value 135 lb. flashes and the weight ◀ is indicated.
- 2) Push the Up / Down button to change the weight value. The weight value increments change by 1/2 lb. By holding the button for more than 1 second, the weight values change at high speed.



3) Push the Set button to set the weight value. The display changes to the age setting screen.



Setting of age (Setting range: NORMAL, 10 to 80 / ATHLETE, 18 to 60 years old)

- Confirm the age setting screen. The age value 40 flashes and the age ◀ is indicated.
- 2) Push the Up / Down button to change the age. The age values change by 1 year. By holding the button for more than 1 second, the age values change at high speed.



Push the Set button to set the age value.The display changes to the gender setting screen.

Setting of gender (Setting: male / female)

- Confirm the gender setting screen.
 The gender "male" flashes.
- Push the Up / Down button to change the gender. The display of male or female flashes alternately.
- 3) Push the Set button.



All the set items are fixed and stored. "Ready" is displayed.

To change any values:

- 1) Push the Set button to flash the personal data you want to change.
- 2) Push the Up / Down button to change the setting.

By pushing both the Up and Down buttons at the same time, the current blinking display will reset to the initial value.

How to delete all 9 personal data values from the memory

- 1) Push the Up button and select the personal No. 1.
- 2) Push the Set button for 2 seconds.
- All personal data are deleted and all displays turn on. (Same state in which the On/Off button is pushed.)

If you leave the set items in the setting screen without confirmation, the display will change to the initial values or the values before setting in approximately 1 minute. After 1 minute, the unit will automatically turn off.

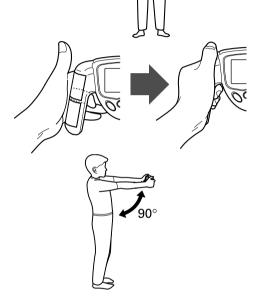
When your age, weight, or height has changed, reset the value accordingly.

3. Start the measurement.

When the values are set to height of 6' 3 1/4, weight of 149 lbs., age 37 years old, and gender male:

1) Stand with both feet slightly apart.

- 2) Hold the grip electrodes. Wrap your middle finger around the groove of the handle. Place the palm of your hand on the top and the bottom electrodes. Put your thumbs up, resting on top of the unit.
- Hold your arms straight out, at a 90 degree angle to your body. Do not move during the measurement.



4) Confirm the ready to measure display.

The **READY** indicator turns on.



5) Push the Start button.

The display **START** turns on.



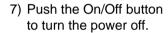


6) Hold the electrodes with both hands. The unit automatically detects that it is held and starts measurement.

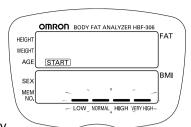
The display flashes one by one and moves to the right end.

The BMI judgment bar turns on immediately after the body fat percentage and the BMI are displayed. (The bar at the right end flashes). You can start another measurement when the READY indicator turns on.

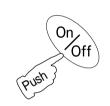
For how to interpret the measurement results in detail, please refer to the following page.



If you do not push the On/Off button, the unit will turn off automatically in approximately three minutes after displaying the measurement results.







Measuring postures that should be avoided

Measurement in the following positions may not provide accurate measurement.

Flbows are bent.



Arms are positioned too upward or downward of the desirable angle to the body.



Moving your body or arms during measurement



Measuring while lying down or sitting



How to hold the grips.

In the following cases, the electric resistance may not be measured correctly.

Your fingers are apart from the grips.





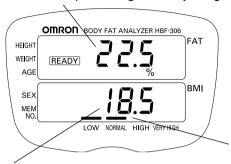
When holding the grips, the hands are positioned unevenly towards the top or the bottom of the electrodes.



How to Interpret the Measured Results

Body fat percentage

Displays the body fat mass as the percentage of body weight.



BMI classificationDisplays LOW, NORMAL,
HIGH, or VERY HIGH.

BMI

BMI is an internationally used index to show the body condition by checking the balance between the height and the weight.

It is calculated by the following formula:

BMI: Body Mass Index = (weight (lbs) x703) / height (in) / height (in)

BMI in metric = weight (kg) / height (m) / height (m)

Recommended Body Fat Ranges and BMI

	Age	Low	Recommended	High	Very High
		(BMI < 18.5)	(BMI 18.5-24.9)	(BMI 25-29.9)	(BMI > 30)
Female	20-39	5-20	21-33	34-38	>38
	40-59	5-22	23-34	35-40	>40
	60-79	5-23	24-36	37-41	>41
Male	20-39	5-7	8-20	21-25	>24
	40-59	5-10	11-21	22-27	>27
	60-79	5-12	13-25	26-30	>30

Based on NIH/WHO guidlines for BMI

Based on Gallagher et al., American Journal of Clinical Nutrition, Vol.72, Sept. 2000

ВМІ	BMI (Designation by the WHO)
Less than 18.5	LOW (Low)
18.5 or more and less than 25	NORMAL (Normal)
25 or more and less than 30	HIGH (Pre-obese)
30 or more	VERY HIGH (Obesity)

The above-mentioned indices refer to the values for obesity judgment proposed by the WHO, the World Health Organization.

How to Care for and Store the Unit

Clean the main unit with a soft dry cloth. If the main unit is heavily stained, wipe it with a cloth lightly dampened with water or detergent, then wipe it dry with a dry cloth. Be careful so that no water gets inside the main unit.



Do not wipe the unit with benzene, gasoline, paint thinner, alcohol, or other volatile detergrents.



Error Displays

Error display	Cause	What to do (the next button to push)
EI	Electrodes were not firmly grasped.	Grasp the grips correctly and measure. (Refer to Pages 12 and 13.) (Start button)
EZ	Measurement posture or grip was not stable.	Measure without moving your arms. (Refer to Pages 12 and 13.) (Start button)
E3	Hands are dry.	Slightly moisten hands with a wet towel, then measure. (Refer to Page 21.) (Start button)
EY	The values of body fat percentage and BMI are outside the measurable range.	Check the set height, weight, age, and gender again. (Refer to Pages 10 and 11.) (Set button)
£5 £6	Abnormal operation	Turn on the On/Off button again and start measurement. If this error still occurs again, consult OMRON customer service, (1-800-634-4350).

Troubleshooting

Trouble	What to inspect	How to repair
When the On/Off	Are the batteries worn out?	Replace both batteries with new ones. (Refer to Page 7.)
button is pushed, nothing is displayed.	Is the direction of battery polarities correct?	Insert the batteries correctly. (Refer to Page 7.)
The value of body fat percentage is displayed abnormally high (or low).	Is the measurement posture correct? Measure again in correct posture. (Refer to Pages 12 to 13.)	
An error (E1 to E6) is displayed and the measurement is impossible.	Please refer to "Explanation of Error Displays". (Refer to Page 15.)	
The measured values differ extremely for each measurement.	Please refer to "For a Correct Measurement" (Refer to Pages 21 to 22.)	
Other conditions.	Push the On/Off button again and restart from the beginning again. (Refer to Pages 8 to 13.)	

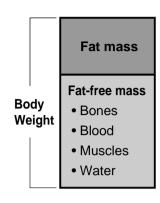
If you cannot get a correct measurement after taking the above mentioned measures, please contact the nearest OMRON dealer.

What You Should Know When Using This Unit

What is body fat percentage?

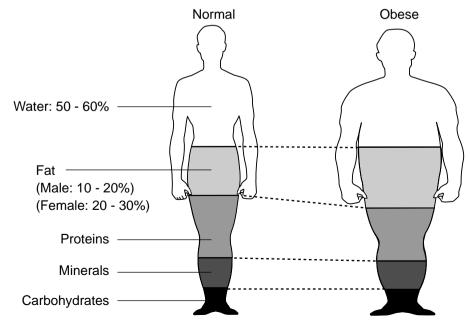
Body fat percentage refers to the amount of body fat mass in regards to the total body weight described in a percentage.

This Omron Body Fat Analyzer will provide your specific body fat percentage and body mass. It is also an excellent tool to measure your body fat percentage and body mass on a continuous schedule.



Body fat percentage (%) = {Body fat mass (lbs.) / Body weight (lbs.)} x 100

Ratio of the body constituents



Principles of body fat percentage measurement

The OMRON Body Fat Analyzer estimates the body fat percentage by the Bioelectrical Impedance (BI) method.

What is the Bioelectrical Impedance Method?

Muscles, blood vessels and bones are body tissues having a high water content that conduct electricity easily. Body fat is tissue that has little electric conductivity. The Body Fat Analyzer sends an extremely weak electrical current of 50 kHz and 500 μ A through your body to determine the amount of fat tissue. This weak electrical current is not felt while operating the Body Fat Analyzer.

The Bioelectrical Impedance Method safely combines the electric resistance with the distance of the electricity conducted. Correct posture and consistent measuring conditions need to be maintained for the best results.

How to estimate the body fat percentage.

Hydrodensitometry, or underwater weighing, has been the established method for accurate evaluation of body composition. Omron has used research information from several hundred people using the underwater weighing method to develop the formula by which the Body Fat Analyzer works. The body fat mass and body fat percentage is calculated by a formula that includes five factors: electric resistance, height, weight, age and gender.

What is the submerged body weight weighing method?

The underwater weighing method submerges a person in a pool from head to toe to be weighed. Omron has collected information on people from 10 to 80 years of age using this method.

(There are certain conditions, such as with dialysis patients, when significant differences may occur between the estimated and actual body fat values. These differences may be related to consistently changing ratios of body fluid and/or bone density.)

For the following cases, the body fat percentage measured by this unit may significantly differ from the actual body fat percentage.

Measurements in the following groups of people may vary due to consistently changing amounts of water and tissue density within their bodies:

Children in a growth stage



Elderly people and post-menopausal women



People with a fever



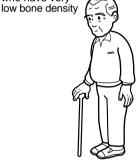
People who have swelling



Bodybuilders or professional atheltes



Patients with osteoporosis who have very



Patients undergoing dialysis



For a Correct Measurement

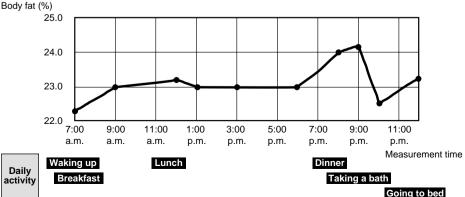
Body fat is affected by the change of water content in the body.

A person's hydration level and blood circulation may have an effect on their body fat reading. In the table below are some situations which could affect the reading.

Cause of Fluctuations	Examples of Fluctuation Periods
Water and food intake	1 to 2 hours after breakfast, lunch, or dinner
Changes in blood circulation	After taking a bath or shower, immediately after exercising, in extreme environments (warm or cold), during illness or extreme fatigue
Change in posture (during measurement)	Moving from an up-right standing position to lying down or prone position

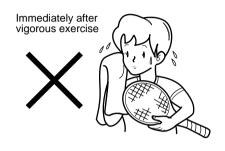
The diagram below shows an example of the changes in body fat throughout the day caused by a change of water content in the body. The changing pattern of body fat percentage varies for each person. In order to obtain highly reliable readings, please note the following pages.

An example of the fluctuation of body fat percentage throughout the day



Please avoid measurement under the following conditions.

If a measurement is made under the following physical conditions, the measured body fat percentage may differ significantly from the actual one because the water content in the body is changing.

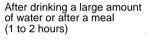






After drinking alcohol









Advice for measurement

If the palms of your hands are dry or the temperature of your palms or the grip of the electrodes are extremely cool, stable measurement is impossible, which may lead to display error indication or inaccurate results.

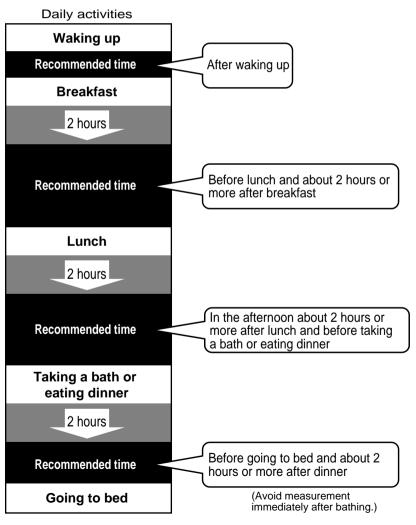
Please pay special attention in winter because the air is dry and/or the temperature is low.

Conditions	Actions
Hands are dry.	Slightly moisten hands with a wet towel, then measure.
When you hold the grip electrodes, they feel cold.	Warm the grip electrodes by leaving the unit in a warm room for approximately ten minutes.
Your body and hands are cold due to the blood not circulating well.	Warm your hands by immersing in hot water or staying in a warm room. Start the measurement again.

Recommended times for measurement

Understanding the normal changes in your body fat percentage can help you in preventing or reducing obesity. Being aware of the times when the body fat percentages shift within your own daily schedule will assist you in obtaining an accurate trending of your body fat. It is recommended to use this unit in the same environment and daily circumstances. (See chart)

Recommended times for measurement



Specifications

Designation	OMRON Body Fat Analyzer
Model	HBF-306
Display	Body fat percentage (4.0 to 50.0%) BMI (7.0 to 90.0) BMI classifacation (4 levels)
Set ranges	Height: 3' 4" to 6' 6" (101 cm. to 198 cm.) Weight: 23 lbs. to 440 ½ lbs. (10 kg. to 220 kg.) Age: NORMAL; 10 to 80 years old ATHLETE; 18 to 60 years old Gender: Male / Female
Power supply	2 AAA batteries (R03). (You may use 2 AAA alkaline batteries (LR03).)
Battery life	Approximately 1 year (when used twice a day)
Operating temperature and humidity	50°F to 104°F (+10°C to +40°C), 30% to 85% RH
Storage temperature and humidity	-4°F to 140°F (-20°C to +60°C), 10% to 95% RH
External dimensions	Approx. 8" (L) x 5" (H) x 2" (W) (197 (L) x 128 (H) x 49 mm (W))
Weight	Approx. 8 oz. (230 g) (not including batteries)
Accessories	2 AAA batteries for monitor use Instruction manual Body Logic Fitness and Nutrition Guide

Specifications may be changed without prior notice.

Caution

CAUTION:

Changes or modifications not expressly approved by Omron Healthcare, Inc. will void the user's warranty.

NOTE:

POTENTIAL FOR RADIO/TELEVISION INTERFERENCE (for U.S.A. only) This product has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If the product does cause harmful interference to radio or television reception, which can be determined by turning the product on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the product and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

POTENTIAL FOR RADIO/TELEVISION INTERFERENCE (for Canada only) This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Canadian Department of Communications.

Cet appareil numérique respecte les limites de bruits radioeléctriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 èdictée par le ministre des communications.

Limited One Year Warranty

Your HBF-306 Body Fat Analyzer is warranted to be free from manufacturing defects for a period of one year under normal use. This warranty extends only to the original retail purchaser.

Should repair be needed within the warranty period, ship the unit prepaid with the proof of purchase date and \$5.00 for return shipping and insurance to:

Omron Healthcare, Inc. Attn: Service Dept. 300 Lakeview Parkway

Be sure to include the model number and your phone number on any correspondence.

Vernon Hills, IL 60061

We will either repair or replace (at our option) free of charge any parts necessary to correct defects in the materials or workmanship.

The above warranty is complete and exclusive. The warrantor expressly disclaims liability for incidental, special, or consequential damages of any nature. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above warranty may not apply to you.)

Any implied warranties arising by the operation of law shall be limited in duration to the term of this warranty. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

This warranty gives you specific legal rights and you may have other rights which vary from state to state.

FOR CUSTOMER SERVICE CALL TOLL FREE: 1-800-634-4350

For Customer Service
Call Toll Free
1-800-634-4350

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